Why is an Embedded XP Operating System Beneficial for You?

Introduction

The Microsoft® Windows® platform is rapidly gaining popularity with embedded system developers because it provides low development costs and allows companies to quickly bring increased functionality to market.

In addition to being a modern, powerful 32-bit operating system platform, Windows provides a number of unique advantages not found in any other embedded operating system:

- The Windows well-known Win32® API, with its associated broad range of development tools and knowledge base, provides a wide base of development talent, tools, and expertise.

- Windows enables the use of the widest range of third-party software components, from device drivers and system extensions to databases and applications of all types.

- Windows also offers comprehensive networking support and connectivity to non-embedded and enterprise information systems.

Rich Native Features

A rich foundation of features is provided in Windows XP. These features include:

- **High Performance**
  Windows XP Embedded runs on high performance processors that provide a required level of power for scalable and demanding embedded system solutions like Video servers.

- **No Graphical User Interface**
  Our embedded solution does not require a GUI. For these environments, Windows XP Embedded supports operation without any display at all. This is known as a "headless" system and management capabilities are provided through MS Netmeeting and a Web-based management interface.

- **Networking Support**
  Windows XP Embedded provides a range of communication capabilities including TCP/IP, WinSock, IP Multicast, SSL, PPP, and PPTP as well as the ability to access files over the network. In addition to these ser-vices, Windows XP Embedded provides advanced networking capabilities such as Routing and Remote Access Services, DCOM, SNMP, multi-network support like Token Ring and Fast Ethernet, Web Server, and the capability to share files to other devices over the net-work.

- **System Services**
  Windows XP Embedded provides an extensive range of full-featured system services for high-end applications. This includes multi-level security, remote management, event and

error logging, full-featured database, NTFS file system, power-fail recovery, transaction file handling and integration with BackOffice applications.

- **Real-Time Support**
  The Windows XP Embedded platform can deliver hard real-time capability, depending on the underlying capabilities of the hardware platform and the device drivers used in the system. High real-time performance is achieved using a modern Win32 full thread-based model with Win32 API calls. This is in contrast to other real-time operating systems (RTOS), which require low level programming and provide simplistic or a limited set of API calls.

- **Programming Interfaces (APIs)**
  In order to accommodate the broadest range of Windows developers, Windows XP Embedded supports the Win32 API set. This allows organizations to employ their knowledge of Win32 API's when building new systems and applications on the Windows XP Embedded platform.

- **Availability of Third Party Software**
  Windows XP supports a broad and rich set of third party software applications that includes device drivers, utilities, databases, network protocols, as well as applications of all types. This enables easy integration with for instance equipment of access control suppliers.

- **Broad Hardware Support**
  Embedded Windows XP provides the ability to use standard off-the-shelf hardware, based on Intel and other compatible processors. This approach enables you to extend your Time Lapse with communication equipment that is affordable. Wireless Ethernet, Token Ring, ASDL or ISDN adaptors it is all available at very competitive prices due to the intense competition in the traditional IT market.

Summary

Windows XP Embedded provides unprecedented benefits to the user by combining the benefit of a familiar Operating System with the advantages offered by an embedded Solution. Video applications having high performance requirements need a proven industrial strength Operating System for which Embedded XP offering the rich media support of regular Windows XP is ideally suited.